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## Background – Why is Mitigation Required?

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The Sacramento region is designated as a serious ozone non-attainment area for the federal 8-hour ozone standard. Ozone, also known as smog, is a harmful pollutant when present at ground level. It is formed in the presence of sunlight typically on summer days and is composed of reactive organic gases (ROG) and nitrogen oxides (NOx). Both ROG and NOx are emitted from motor vehicles. ROG is also emitted from paints, solvents and other chemicals. The ozone non-attainment area covers all of Sacramento and Yolo counties and parts of Placer, El Dorado, Solano and Sutter counties. This area is required to attain the ozone standard by 2013.

With off-road equipment (typically used for construction) contributing to approximately 16% and on-road vehicles contributing approximately 60% of the Sacramento region's NOx and ROG emissions, mitigation efforts to reduce emissions from construction projects and the build out of land development projects are essential in order for the Sacramento region to attain the ozone standard.

In addition to not attaining the ozone standard, Sacramento County does not attain the state particulate matter standards for PM10 and PM2.5, particles less than 10 microns and 2.5 microns in diameter). Reduction of particulate matter by all feasible means is necessary to attain the state's particulate matter standards.

## CEQA Guide to Air Quality Assessment

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In order to determine whether a project will have significant air quality impacts, the AQMD strongly recommends that project proponents and public agencies (in the Lead Agency role) consult the AQMD's CEQA Guide to Air Quality Assessment during the Initial Study phase of the CEQA process as well as subsequent project phases.

The AQMD's [CEQA Guide to Air Quality Assessment](#) (PDF 1.1 Mb) provides the following tools:

- methodologies for the review of air quality impacts from development projects
- screening approaches and specific methods and techniques for calculating emissions, with references to applicable emissions models where appropriate

- mitigation measures project proponents can use to reduce the air quality impact of their projects

You may download the [local meteorological data files](#) (ASC file 428 Kb) for the BEEST/ISCT3 model as referenced in the Guide to Air Quality Assessment.

Identifying significant air quality impacts and mitigation measures early in the project's planning process, ideally prior to application submittal, will allow sufficient time for the development of fundamental design changes that benefit air quality at the lowest possible cost.

For assistance with the use of the CEQA Guide or with air quality assessment in specific jurisdictions please contact the AQMD staff listed below.

Contact Information			
Area of Expertise	Staff	E-mail	Phone
CEQA Guidance Document	Peter Christensen	<a href="mailto:pchristensen@airquality.org">pchristensen@airquality.org</a>	916-871-1111
General Land Use City of Sacramento City of Rancho Cordova	Jeane Borkenhagen	<a href="mailto:jborkenhagen@airquality.org">jborkenhagen@airquality.org</a>	916-871-1111
City of Citrus Heights County of Sacramento – North & Central	Rachel Dubose	<a href="mailto:rdubose@airquality.org">rdubose@airquality.org</a>	916-871-1111
City of Elk Grove County of Sacramento - South	Charlene McGhee	<a href="mailto:cmcghee@airquality.org">cmcghee@airquality.org</a>	916-871-1111
City of Galt	Karen Huss	<a href="mailto:khuss@airquality.org">khuss@airquality.org</a>	916-871-1111
City of Folsom	Joseph Hurley	<a href="mailto:jhurley@airquality.org">jhurley@airquality.org</a>	916-871-1111

## **Frequently Asked Questions - CEQA Guide and URBEMIS**

For answers to frequently asked questions about CEQA and air quality analysis in Sacramento, please consult the [CEQA Guide to Air Quality Assessment](#) (*revised May 2006*) (PDF 186 Kb).

The URBEMIS model is commonly used to calculate air emissions from projects. More information about the URBEMIS model can be found at [www.URBEMIS.com](http://www.URBEMIS.com).

The AQMD provides training sessions on its mitigation programs and the URBEMIS model. The following presentation is from the training session held on December 7, 2005.

- [AQMD URBEMIS CEQA training](#) (PDF 718 Kb)
- [URBEMIS Presentation \(Tim Rimpo\)](#) (PDF 1.9 Mb)

If you are interested in attending a future training session contact Jeane Borkenhagen at [jborkenhagen@airquality.org](mailto:jborkenhagen@airquality.org)

874-4885.

## CEQA Thresholds of Significance

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### Mass Emission Threshold

Project Type	Ozone Precursor Emissions (pounds per day)	
	ROG	NOx
Short-term Effects (Construction)	None	85
Long-term Effects (Operation)	65	65

### Emission Concentration Threshold

In addition to the above mass emission thresholds, the California Ambient Air Quality Standards (CAAQS) are applied as significance criteria to all phases of a project.

### Substantial Contribution Threshold

A project is considered to contribute substantially to an existing or projected violation of a CAAQS if it emits pollutants equal to or greater than five (5) percent of the CAAQS.

[Public Notice regarding the effective date of revised significance threshold](#)

## Mitigating the Air Quality Impacts of Construction

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Emissions associated with heavy-duty construction equipment contribute significantly to poor air quality in the Sacramento region. Construction activities such as earth-moving and general construction using heavy-duty diesel equipment may require quality mitigation. Construction air quality impacts are described in detail in Chapter 3 of the CEQA Guide to Air Quality Assessment.

More specifically, projects defined by CEQA that exceed the construction threshold of 85 lbs/day of NOx must mitigate air quality impacts. To mitigate these impacts, the AQMD has developed [Standard Construction Mitigation Language](#) that it recommends for construction projects. This standard mitigation should be applied to land use as well as roadway construction projects. ***Please note that the standard mitigation should only be applied to projects that exceed the significance threshold.***

If standard mitigation does not reduce construction impacts below the 85 lbs/day NOx threshold, AQMD staff can assist in determining when a mitigation fee is appropriate and what the fee should be.

Standard construction mitigation requires a project proponent to develop a plan to show:

- A list of heavy-duty (>50 horsepower) off-road equipment used for construction that meets the standard emission reduction of 20% NOx and 45% PM10;
- Ensure that visible exhaust emissions for the above equipment do not exceed 40% opacity for more than 3 minutes.

any 1 hour period.

AQMD staff must review and endorse construction mitigation plans prior to work on a project site.

The AQMD has developed the following tools to assist in assessing construction impacts and applying this Standard Construction Mitigation:

- A [Roadway Construction Emissions Model](#) (revised version 5.2, 2006, in Excel - 2 Mb) to assist roadway project proponents in determining the emission impacts of their projects; and
- A [Construction Mitigation Calculator](#) (Dec 2005) (XLS 967 Kb) to assist project contractors in determining compliance with the standard mitigation measures; and
- A [Model Equipment List](#) (XLS 18 Kb) to assist contractors in gathering information regarding their project and fleet.

For assistance with construction mitigation please contact any of the AQMD staff listed below.

Contact Information			
Area of Expertise	Staff	E-mail	Phone
Construction Mitigation	Karen Huss	<a href="mailto:khuss@airquality.org">khuss@airquality.org</a>	916-874-4881
Construction Mitigation	Charlene McGhee	<a href="mailto:cmcghee@airquality.org">cmcghee@airquality.org</a>	916-874-4883
Roadway Construction Emission Model	Peter Christensen	<a href="mailto:pchristensen@airquality.org">pchristensen@airquality.org</a>	916-874-4886

The AQMD has developed a [protocol fact sheet](#) (PDF 19 Kb) on construction mitigation to assist municipalities and their consultants on the AQMD's requirements and process.

## Mitigating the Air Quality Impacts of Land Development Projects

Projects defined by CEQA which exceed the AQMD's operational threshold of 65 lbs/day of ROG or 65 lbs/day of NO<sub>x</sub> must mitigate the air quality impacts. Air quality impacts must be reduced by a minimum of 15%.

Project proponents must prepare an Air Quality Mitigation Plan which describes all feasible measures to reduce air quality impacts from their project. See Appendix E of the CEQA Guide to Air Quality Assessment for recommended [mitigation measures](#) (PDF 25 Kb).

The AQMD staff reviews and endorses Air Quality Mitigation Plans prior to project approval by planning commissions, city councils and/or board of supervisors. ***Coordination with AQMD staff should be started as early as possible in the process. AQMD staff strongly recommends that this process be initiated when the projects are still in the conceptual stages.***

The AQMD has developed a [protocol fact sheet](#) (PDF 12 Kb) on operational mitigation for land development projects to assist municipalities and their consultants on the AQMD's requirements and process.

## Mitigation Fees

As of June 1, 2006, the AQMD will use an updated mitigation fee rate of \$14,300 per ton of emissions. The mitigation fee is based on the Carl Moyer Program cost effectiveness cap. In January 2006, the Carl Moyer Program Guidelines were updated accounting for this increase in mitigation fee rate. The mitigation fee guidance and calculator below are updated to reflect

change.

The AQMD has provided [guidance for including mitigation fees in Environmental Impact Reports](#) (PDF 525 Kb). This is effective as of October 10, 2005.

The AQMD has developed a [mitigation fee calculator](#) (XLS 16 Kb) for municipalities and their consultants to utilize when mitigation is necessary for a construction project.

[Fact sheets](#) (PDF 287 Kb) are available for emission reduction projects funded with mitigation fees.



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